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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,518

04/13/2006

Pierre Charlier De Chily

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2749

6449

7590

12/29/2008

ROTHWELL, FIGG, ERNST & MANBECK, P.C.

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WASHINGTON, DC 20005

EXAMINER

CUTLIFF, YATE KAI RENE

ART UNIT

PAPER NUMBER

1621

NOTIFICATION DATE

DELIVERY MODE

12/29/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No. 10/540,518	Applicant(s) CHARLIER DE CHILY ET AL.	
	Examiner YATE' K. CUTLIFF	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 11-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/23/2005 & 9/7/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in the reply filed on October 16, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse.
2. Claims 11 – 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 16, 2008.
3. Claims 1—10 and 20 – 25 are under examination.

Specification

4. The disclosure is objected to because of the following informalities: The application includes Figures 1-4; however, the Specification does not include a brief description of the drawings.

When there are drawings, there shall be a brief description of the several views of the drawings and the detailed description of the invention shall refer to the different views by specifying the numbers of the figures, and to the different parts by use of reference letters or numerals (preferably the latter). (MPEP 608.01(f) & 37 CFR 1.74.).

Appropriate correction is required.

Claim Objections

5. Claims 3, 6 and 25 objected to because of the following informalities:

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6. Claims 3 and 6 are objected to for consisting of multiple paragraphs. Applicant is reminded that each claim must be the object of a sentence. **Each claim begins with a capital letter and ends with a period.** Periods may not be used elsewhere in the claims except for abbreviations. See *Resole v. Manbeck*, 36 USPQ2d 1211 (D.D.C. 1995). (MPEP 608.01(m)).

Appropriate correction is required.

7. Claim 6, line 21, contains the word "alcane" which is the French term for alkane.

Appropriate correction is required.

8. Claim 25 does not end with a period

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 3, 6, 7, 9, 10 and 22, rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then

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narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 3 recites starting at line 4 the broad recitation "range from about 300 MHz to about 30 GHz", and the claim also recites "preferably standing at 915 MHz... or at 2.45 GHz..." which is the narrower statement of the range/limitation. Additionally, claim 3 recites starting at line 7 the broad recitation "range from about 3 MHz to about 300 MHz", and the claim also recites "preferably standing at 13.56 MHz ... or 27.12 MHz..." which is the narrower statement of the range/limitation.

12. Claim 3, at lines 5, 6, 8 and 9 places several phrases in parentheses; i.e. (authorized frequency with a tolerance of 1.4%), which renders the claims indefinite.

13. Claim 6, uses the trademark "Cardura E10®". Trademark or trade names are used to identify a source of goods, and not the goods themselves. Thus a trademark or trade name cannot be used to properly identify any particular material or product. In this instance it appears that Applicant is using the mark to limit the fatty acid.

14. Claim 7, in line 3 to end, places a phrase parentheses which renders the claims indefinite.

15. Claim 9, uses a plurality of the trademarks, i.e. "Amberlite™". Trademark or trade names are used to identify a source of goods, and not the goods themselves.

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Thus a trademark or trade name cannot be used to properly identify any particular material or product. In this instance it appears that Applicant is using the mark to limit the resin catalyst.

16. Claim 9, in lines 3 and 4 to 6, places a phrase in parentheses which renders the claims indefinite.

17. Claim 10, includes a table. Claims may contain tables either if necessary to conform to 35 U.S.C. 112 or if otherwise found to be desirable. (MPEP § 2173.05(s)). However, in this instance it is unclear how this table is further limiting heat treatment process of claim 1. Therefore, the inclusion of the table renders the claim vague and indefinite.

18. Claim 22, line 2, includes the phrase "we can cite as non-limitative examples" renders the claim indefinite. It is unclear whether Applicant is attempting to state that the process of claim 1 can optionally use with any of the listed reaction types.

Claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

20. Claim 1 – 9 and 20 - 25 are rejected under 35 U.S.C. 102(b) as being anticipated by UCB, S.A. (EP 0992480 A1).

21. The rejected claims cover, inter alia, a heat treatment process in a chemical synthesis, of the dielectric type, characterized in that said dielectric heating is carried

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out intermittently, that is to say, the reagent or reagents is/are subjected to electromagnetic waves intermittently, in combination with a recycling system.

Dependent claims 2 and 3 limit the frequencies. Dependent claim 4 set outs a limitation regarding the volume of reactants exposed to dielectric heating. Dependent claims 5, 6, 9 and 21 set out limitations on the reactants. Dependent claims 7, 8, 20 and 22 - 26 set out other processing limitations and other types of synthesis where the heating process may be used.

22. UCB teaches a process for making (meth)acrylate esters and polyester (meth)acrylates by a process that uses two types of dielectric heating sources, microwave and frequency sweeping, where the heating may be intermittently applied. (see abstract, [0014], [0015], [0016], [0024] & Control Example 1). In the process of UCB the frequency of generation is generally 300 MHz to 30 GHz and corresponding wavelength of about 1m to 1mm, the preferred frequency ranges being about 850-950 MHz or about 2300-2600 MHz. Also, UCB discusses the well known frequency levels for microwave heating. (see [0013]). The reactants include alcohols, hydrocarbons and esters. (see [0015] & [0016]). Catalyst used in the UCB process include for example: sulfuric acid, sulfonic acid, ion exchange resins, mineral acids, acidic clays, etc. (see [0019]). Intermittent application of the microwave energy is done to prevent overheating of the reaction mixture. (see [0024] & [0025]). The reactants may be premixed prior to introduction to the reaction zone or reaction vessel; simultaneously fed to the reaction zone or reaction vessel; or various components combined in a single stream while other components are fed in a different stream. Further, the reactants may be pre-treated

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with an inhibitor prior to any significant microwave exposure, the inhibitors make the reactant less reactive by retarding polymerization of the reactants during the reaction process. (see[0020] & [0029]). The process of UCB can take place under vacuum, at atmospheric pressure or above atmospheric pressure. (see [0033]). The process can run in batch, step-wise batch, semi-continuous process, or continuous mode. In the continuous or semi-continuous mode, recycling of the mixture through the microwave reaction zone can be done a single time or multiple times. (see[0036] & [0043]).

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

25. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

26. Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over UCB, S.A. (EP 0992480 A1) in view of Charlier de Chily (WO 2000/26265; US 6,656,980).

27. The rejected claims cover, inter alia, a heat treatment process in a chemical synthesis, of the dielectric type, where the dielectric heating is carried out intermittently, and as further describe in paragraph 21 above. Further, as set out in claim 10, the frequency differs based upon the volume of reactant being exposed to the dielectric energy.

28. As set out above in paragraph 22, UCB substantially discloses a process for heat treatment of a chemical synthesis using dielectric heating.

The difference between the instantly claimed processes is the discussion of adjusting the frequency of the dielectric energy based upon the volume of reagents used in laboratory treatments or industrial treatments.

However, Charlier de Chily discloses experiments where frequency can be adjusted for the volume of reactants being used in a polymerization process and based upon the desired end product and the need to prevent overheating of the reactants. (see column 6, lines 49-55 & column 9, lines 21-37 of '980).

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Therefore, from the teaching of Charlier de Chily, any change variations in the dielectric frequency used in the instantly claimed process, based upon the volume of the reagent used in the process, merely amounts to routine experimentation, that would be within the purview of the ordinary skilled artisan. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Art Made of Record

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Vanderhoff (US 3,432,413); Pelesko et al. (US 5,239,017); and Jhingan (US 5,350,686).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YATE' K. CUTLIFF whose telephone number is (571)272-9067. The examiner can normally be reached on M-TH 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel M. Sullivan can be reached on (571) 272 - 0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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